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THE CLASSIFICATION OF THE SCOTERS.

BY W. DE W. MILLER.

THE Scoters form a group of sea-ducks allied to the Eiders, marked by their prevailing black plumage and their particolored and variously swollen bills. The unbarred plumage of the females, the unmodified syrinx, and the buffy instead of greenish eggs are other diagnostic features.

The six species are usually combined in one genus, *Oidemia*, with three subgenera. These have at times been recognized as full genera, as by Baird, Brewer, and Ridgway in 1884. Reichenow (1913) considers *Pelionetta* (the Surf Scoter) sufficiently distinct from the two other subgenera combined to stand by itself. The unnaturalness of the latter arrangement is obvious in view of the facts cited below, and on the other hand I believe the recognition of three genera is unnecessary.

The form and feathering of the bill is quite unlike in the three subgenera — indeed no two species agree in these respects and for this reason the value of these differences as generic characters is very doubtful. However, three well-marked structural characters that have been more or less lost sight of, though all three are described by MacGillivray in Audubon's Birds of America, together with a number of other peculiarities, render it necessary, in my opinion, to restrict *Oidemia* to *O. nigra* and *O. americana*. *Melanitta* will then be used generically for the three White-winged Scoters, *M. fusca*, *M. deglandi* and *M. carbo*, and also for the Surf Scoter, *M. perspicillata* (subgenus *Pelionetta*).

Dr. Dwight, in his article in 'The Auk' (July, 1914, p. 293) has called attention to the emarginate outer primary in true *Oidemia*, a character strangely forgotten for many years. Correlated with this is another structural peculiarity that has been largely overlooked though mentioned by Coues in his 'Key.' In *Oidemia* there are sixteen tail-feathers, in *Melanitta* and *Pelionetta* only fourteen. Further, in the first-named the tail is longer and much more graduated, the feathers narrower and more pointed.

The third difference is in the form of the trachea. In the males

of *Melanitta* and *Pelionetta* the trachea is abruptly enlarged at its upper end and again at a point some distance above its bifurcation into the two bronchi. At least the lower of these two bulbous enlargements is possessed by many other genera of Ducks. Both however, are wholly wanting in true *Oidemia*, which also differs in having the bronchi somewhat enlarged. After describing the larynx of *Oidemia americana*, MacGillivray (Birds of America, 1843, p. 346) remarks: "It is indeed very remarkable that this species, so nearly allied to the Velvet (White-winged) and Surf Ducks, should present no dilatations, either at the upper larynx, or in the course of the trachea, as are seen in them *** The trachea of the male of this species merely resembles that of the female of the other species." MacGillivray states that the trachea of the Surf Scoter "presents the same structure as that of the Velvet Duck," but several differences of specific or subgeneric value are pointed out by William Thompson in the 'Annals of Natural History,' XVIII, 1846, p. 370, and by Herbert Langton in 'The Zoologist' for 1881, Third Series, Vol. V, p. 59. In the first-cited article the trachea of the Surf Scoter is figured, drawn to the same scale as that of the Velvet Scoter (*M. fusca*) in Yarrel's British Birds, Vol. IV, p. 480. The trachea of the Black Scoter (*O. nigra*) is figured on p. 475 of the latter work.

All the Scoters agree in having the syrinx itself normal, while according to Beddard, in all other ducks, so far as known, with the exception of the very different *Biziura* (and probably *Erismatura* also) this organ is modified into a remarkable, usually asymmetrical, bony or partly membranous box. In *Somateria* (*S. mollissima*) the presence of a very slight symmetrical enlargement of the syrinx indicates the relationship of the *Somateriæ* with the *Oidemiæ* (Beddard, The Structure and Classification of Birds, pp. 463-4).

The diagnostic characters of the two genera of Scoters as above limited may be summed up as follows:

Oidemia.—Bill smaller, commissure shorter than inner toe with claw; basal portion of maxilla bulbous-enlarged above but scarcely laterally, the swelling bare; outline of facial feathering nearly straight, not angled.

Tenth (outer) primary, in adult male, greatly attenuated, shorter than the eighth. Tail relatively long, decidedly more than twice

the length of tarsus; graduated for decidedly more than one-half its length, and for considerably more than length of tarsus; consisting of sixteen feathers, which are narrow and conspicuously pointed. Plumage in the adult male wholly black (but much paler on inner webs of primaries); in immature birds of both sexes the upper half of the head is dark brown, the lower half whitish. Feet and nail of both mandibles black. Iris dark brown.

Melanitta.—Bill larger, commissure longer than inner toe with claw; basal half of maxilla much enlarged both above and laterally, the swelling more or less extensively feathered either on top or sides; outline of facial feathering strongly angled.

Tenth (outer) primary normal, longer than the eighth. Tail relatively shorter, decidedly less than twice length of tarsus; graduated for less than one-half its length, and for less than length of tarsus; consisting of fourteen feathers, which are rather broad and moderately short-pointed.

Plumage in the adult male black variegated with white; in immature birds of both sexes the head is dark brown with two white blotches on each side. Feet red, nail of both mandibles yellow. Iris white.

In comparison of bill with inner toe, the claw is included in measurement of latter contrary to the diagnoses in the British Museum Catalogue and Ridgway's Manual, as it is found that in true *Oidemia* the length of the commissure instead of being much less than inner toe, without claw, as stated in these works, is scarcely if at all less.

Pelionetta differs conspicuously from *Melanitta* in the form of the bill, the lateral swelling being more developed and wholly bare, and the sides of the maxilla tapering instead of widening to the tip. The outer primary is decidedly narrower than the very broad outer remex of *Melanitta* and the tail is distinctly longer and more graduated, there being in both of these characters an obvious approach to *Oidemia*.

The differences between *Oidemia* and *Melanitta* (including *Pelionetta*) enumerated above are certainly of as great taxonomic value as those on which *Lophodytes*, *Arctonetta*, *Nomonyx* and *Charitonetta* are based; and if these are maintained the old genus *Oidemia* must be dismembered. Whether *Pelionetta* should be

generically separated is a difficult question to decide. Agreeing, as it does, in most essential characters with *Melanitta*, I believe that it is best considered congeneric with the latter so long as *Erionetta* is included in *Somateria* and *Marila* is used in a broad sense.

Of the genera of Sea Ducks recognized in the A. O. U. 'Check-List,' perhaps the most doubt has been attached to *Charitonetta* which is not separated from *Clangula* by British authors. MacGillivray, however, states (*t. c.*) that in the Bufflehead the trachea has "scarcely any appearance of dilatation at the part which is so excessively enlarged in the Golden-eyed Duck, which in form and habits is yet very closely allied."



THE BREEDING OF THE PRAIRIE HORNED LARK AT HATLEY, STANSTEAD COUNTY, QUEBEC.

BY H. MOUSLEY.

THE Prairie Horned Lark belongs to one of those progressive families of birds, which by their pushing character have so adapted themselves to their natural surroundings as to have increased their breeding range of late years from the central part of the continent even to eastern Massachusetts in 1903, at least this is the generally recognized opinion, I believe, amongst most authorities, although there are others again who contend that the bird has always occurred in small numbers throughout the northeastern states, but that it has passed unnoticed until recent years, when the increase of field collectors has drawn attention to its presence. However this may be, there are other traits in its life history which mark it out as a bird of distinction, the finding of whose nest and eggs is always looked upon by the field student as a pleasurable event. It was only during the spring of the past year, 1915, that I succeeded in finding it breeding at Hatley, although I had been on the